

220 S. 27th Street, Suite A, Billings, MT 59101 Tel: 406.248.1154 February 2, 2007

Good afternoon, Chairman Sonju and members of the Transportation Committee.

My name is Helen Waller. My husband, Gordy and I farm in McCone County. I am here representing myself, and the Northern Plains Resource Council, and I am speaking in support of House Bill 309.

Rural communities throughout Montana are struggling to survive and are searching for economic activity that will offer employment opportunity, and allow our rural people to prosper. The production of biodiesel holds this promise, as is being successfully demonstrated in neighboring states. When coupled with **locally owned and operated** biodiesel facilities, the result is rural prosperity.

The driving force behind this concept is creation of a market for biodiesel., which is the purpose of HB309. Creating the market will hasten the construction of biodiesel plants in Montana, which in turn will provide a market for oilseed crops that can be grown here. Montana's experiment station scientists have done exceptional work over the years to improve various oilseed crops. Raising oilseed crops profitably offers farmers more planting options.

We have used biodiesel on our farm—in fact a 20% blend, and it works well, but it had to be trucked in from North Dakota. I look forward to using fuel on our farm that has been produced in Montana.

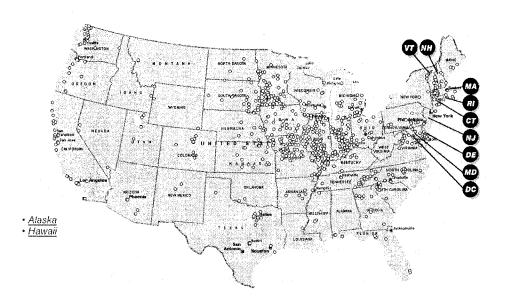
Locally raised oilseed crops used for feedstock in locally owned and operated biodiesel facilities to be consumed by local folks is an example of energy self-reliance at its best! I urge you to support House Bill 309. Thank you.



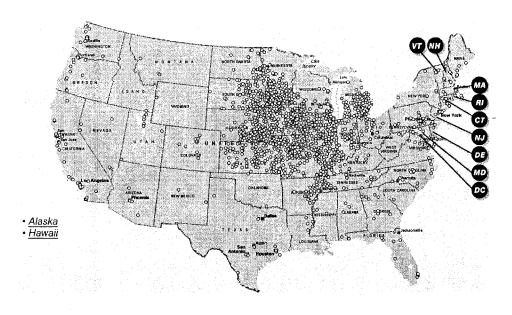
BIODIESEL: HOMEGROWN PROSPERITY

Answers to common questions and issues raised by the development and use of this renewable fuel

WHERE IS BIODIESEL AVAILABLE FOR PURCHASE?



WHERE IS BIODIESEL DISTRIBUTED?



BIODIESEL RETAILING COMPARISON

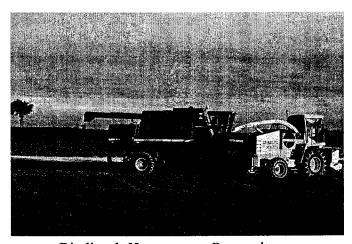
	Dollars/Gal			
Location	Blend	Biodiesel	Petrodiesel	Time available
Seattle, WA	B 5	2.990	2.699	4 weeks
Enfield, NH	B20	2.590	2.590	6 months
Missoula, MT	B20	2.590	2.569	1 year
Bellingham, WA	B5	2.690	2.690	1 year
Hesperia, CA	B20	2.790	2.790	1.5 years
Council Bluffs, IA	B20	2.460	2.479	2 years
Litchfield, IL	B11	2.530	2.630	2.5 years

This chart compares the retail prices of biodiesel blends with petroleum diesel. The "Time available" column indicates how long biodiesel has been available at that location. In most cases, the longer biodiesel is available at the pump the lower the price. However, an increase in biodiesel producers and distributors also reduces the resulting retail price for biodiesel.

Example: in Council Bluffs, Iowa, and Litchfield, Illinois, where biodiesel has been available for two or more years and numerous state biodiesel producers and distributors exist (fig. 1&2), biodiesel is cheaper than regular diesel. In Missoula, Montana, biodiesel has been available for a year but has virtually no support from state biodiesel producers or distributors (fig. 1,2), causing regular diesel to be two cents cheaper than biodiesel. However, the retail price for biodiesel in Missoula was one to two cents cheaper than petroleum diesel during the mid-summer oil price spike.

EMISSIONS

- Biodiesel has a closed carbon cycle, meaning that any carbon released as a result of biodiesel production will eventually be taken up again by other plants that require it for photosynthesis. Biodiesel production does not add to the net carbon dioxide concentration in the atmosphere.
- Biodiesel is the only renewable fuel that fully complies with the Health Effect requirements laid out in the Clean Air Act.
- Biodiesel burns cleaner than petroleum diesel. The ozone forming potential of biodiesel's hydrocarbon output is 50% less than that of petroleum diesel.
- The emission of sulfur oxides and sulfates, major components of acid rain, are virtually eliminated in biodiesel.
- Emissions of particulate matter are nearly 50% lower in biodiesel than in petroleum diesel.
- Emissions of the poisonous gas carbon monoxide are 48% lower from biodiesel than from petroleum diesel.
- The emissions of smog forming hydrocarbons from biodiesel are 67% lower than hydrocarbon emissions from petroleum diesel.
- The nitrogen oxide emissions from 100% biodiesel are approximately 5% to 10% higher than petroleum diesel. Biodiesel's lack of sulfur allows for the use of nitrogen oxide emission control technologies that cannot be used with petroleum diesel.



Biodiesel: Homegrown Prosperity

ENERGY CONTENT

- The energy content, or heating value, of biodiesel refers to the heat released during combustion. A fuel's energy content contributes to vehicle torque, horsepower, and fuel economy and is responsible for differences in each.
- #2 deisel fuel usually has a higher energy content than #1 deisel fuel. Theoretically, biodiesel has a slightly lower energy content than #2 diesel fuel: approximately 8% by volume. However, real life applications show lower energy losses using biodiesel due to the fuel's higher viscosity.
- In most fleet applications, biodiesel consumption rates were between 0% and 5% lower than petroleum diesel rates.
- Studies have shown that drivers who are able to reduce their highway speeds by just two miles per hour will more than make up for the difference in fuel economy.

COLD WEATHER PERFORMANCE

- Over the past seven years, institutes like the Cleveland Technical Center and the University of Missouri thoroughly studied biodiesel's Cold Flow Properties. Tests were conducted with a variety of diesel fuels, biodiesel blends, and cold flow enhancing additives.
- Results of the tests indicate that biodiesel begins to gel sooner as the concentration is increased. However, biodiesel concentrations below 20% have cold flow properties virtually identical to those of #2 diesel fuel. B20 exhibited only a small increase (3 to 5°F) in its cold flow properties compared to #2 petroleum diesel.
- Cold weather performance of biodiesel can improve using the same methods required to prevent gelling in petroleum diesel fuel. Methods include turning on the fuel line and fuel filter heaters, storing vehicles inside a building or garage, and adding pour point enhancers to the fuel.
- Pour point enhancers reduce the ability of wax crystals in the fuel to grow and combine.
- Regardless of attempts to prevent gelling, research conducted by the Cold Flow Blending Consortium maintains that biodiesel must be at least 10°F above its cloud point in order to blend successfully with diesel fuels in cold climates.

BIODIESEL AND LUBRICITY

- Rotary and distributor fuel injection pumps rely on the fuel itself, not the engine oil, to lubricate the engine's moving parts while many other fuel systems require partial fuel lubrication.
- The "lubricity" of a fuel refers to its ability to prevent the wear and scarring of moving parts by reducing the friction between them. The superior lubricity of biodiesel adds greatly to engine life.
- The lubricity of biodiesel fuel is far superior to the lubricity of petroleum diesel. Reduced sulfur standards for petroleum diesel result in the loss of lowering compunds in the fuel.
- Biodiesel is naturally sulfur free, resulting in the superior performance of oxidation catalytic converters in the exhaust system.

COST

- Biodiesel is considered a "drop in" product because it can be used in any diesel engine without major modifications to the engine or fuel system. Mechanics do not require special training in order to work on a biodiesel engine.
- The same systems used to store petroleum diesel can also be used to store biodiesel.
- The cost of producing biodiesel depends on a number of factors: the market price of vegetable oil or other feedstocks, the stability of the petroleum market, the availability of production chemicals, and the scale of production.
- Many biodiesel producers have mitigated production costs by marketing production byproducts like glycerin.
- As the demand for and production capacity of biodiesel increases, the resulting cost to the consumer will decrease.



NORTHERN PLAINS RESOURCE COUNCIL is a grassroots conservation and family agriculture group that organizes citizens to protect water quality, family farms and ranches, and Montana's unique quality of life. For more information, contact:

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Section C

Saturday, November 11, 2006

Bozeman streets chief backs biodiesel

The Source

By CLAIR JOHNSON

Of The Gazette Statt

John Van Delinder, Bozeman's street superintendent, cut to the chase when he discussed using biodiesel in that city's vehicle fleet since 2001.

"No problems at all," he said.

Van Delinder was part of a panel discussion on biofuels Friday at the Northern Plains Resource Council's 35th annual meeting in Billings. Other speakers included David Morris, an energy consultant and adviser to the Energy Department for four U.S. presidents, and Howard Haines, bioenergy program manager for the Montana Department of

Environmental Quality.

The meeting's theme is Montana's energy future, including biodiesel, global climate change, citizen power and water rights. The conference continues today at the Crowne Plaza Hotel downtown.

A sticker on the back of Van Delinder's truck, "20 percent of my fuel is produced by farmers," draws comments and questions, he said. And Van Delinder is happy to oblige.

"It's a good thing," he said. "I love talking about biodiesel."
Biodiesel is fuel made by process-

ing oil seeds, such as safflower, canola or sunflowers, with alcohol and a catalyst.

Van Delinder said there have

is equipment-conversion costs associding ated with switching to fuel that is 20 cit-percent oil-seed based. He puts biodiesel in the city's 1978 loader, a the 1982 grader and its newer rigs. "Again, no problems," he said.

The street department uses about 10,000 gallons of fuel a year and buying B-20, which means biodiesel with a 20 percent blend of biologically produced materials, costs about 7 cents less per gallon regular diesel, he said. The city's forestry crew, which he oversees, swears the chipper produces less smoke and fumes running on biodiesel.

The only problem, Van Delinder conceded, was that he has a little

trouble getting the "old timers" on board. "They're just not wanting to try something new" and are afraid their equipment will break down, he said.

When another department comes to his shop for maintenance, he'll fill their vehicles with biodiesel and "they don't even know they're using it," he said.

Van Delinder said he's trying to get other Bozeman city departments, like parks and sanitation, which drives 60 miles round trip to the landfill, to use biodiesel.

While Bozeman's street department is an example of how fleets can

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cut dependence on petroleumbased fuels, other panelists talked about emerging policies for biofuels and the possibilities for producing biodiesel in Montana.

Morris, vice president of the Institute for Local Self-Reliance, a nonprofit group based in Manneapolis, said there needs to

be a sense of urgency about using biodiesel and other alternative fuels, such as ethanol.

The problem is overcoming inertia and sometimes hostile bureaucracies.

The United States used to be a net exporter of oil but now is 60 percent dependent on foreign oil, Morris said. And 75 percent of the oil reserves are in countries that don't have the best interests of the United States at heart, he said. The country is paying billions of

dollars for oil to countries that finance groups "whose mission it is to destroy us," he said.

The 2005 energy bill passed by Congress provided incentives for biodiesel and ethanol and a new renewable industry is emerging. Morris said.

There are opportunities for organizations like NPRC, a grass-roots group that works to protect the environment and family farms and ranches, to move the new industry.

Morris suggested federal incentives should go to farmer-owned production facilities.

Haines said the three biodiesel crushing plants in Montana are all underused. There are opportunities for production and growth in the industry, he said. Montana has 22 native perennial and 16 annual kinds of oilseeds in addition to five commercial seeds, including safflower, sunflower, flax, canola and mustard, he said.

The Source

Biofuel should be in Billings' future

or the past five years, the Bozeman street department has powered its 30 diesel vehicles with biodiesel. Biodiesel is cheaper for the department than regular diesel, street superintendent John Van Delinder told a Billings audience Friday.

The recently expanded public bus service in Bozeman also is using biodiesel in its leased buses and plans to continue with the more environmentally friendly fuel when it purchases new buses, according to Montana State University information. The system represents a collaboration of MSU and local government.

Biodiesel buses on the road

This summer, about the same time that Bozeman public transportation expanded, Missoula announced that five city buses would start running on biodiesel. Some tour buses ferrying tourists through Yellowstone and Glacier national parks also run on biodiesel.

Northern Plains Resource Council invited Van Delinder to Billings to speak at its annual meeting as part of a biodiesel panel. His department in Bozeman uses about 10,000 gallons of biodiesel annually, a fraction of the fuel needs for the city of Billings. Other Bozeman city departments aren't yet using biodiesel as the street department has been, but Van Delinder said his supervisor has directed him to educate those department chiefs about this alternate fuel.

"We haven't had any problems," he said. The department is using 20 percent biodiesel in a variety of vehicles with no special modifications for the biofuel.

Comparing costs

Another speaker on the panel, Howard Haines of the Montana Department of Environmental Quality, said the state has untapped capacity to produce biodiesel. Montana has 38 kinds of native oilseeds and also grows commercial safflower, sunflower, flax, canola and mustard — all of which can be used in biofuel production. Haines said the three biodiesel crushing plants in the state are underused.

These new biodiesel projects bring us back to Billings. What is Montana's largest city doing to take advantage of a cleaner, potentially cheaper fuel that can be produced with oil seeds grown in this state?

Billings city departments, including the MET bus system and the city motor pool, have done substantial research on biodiesel, Assistant City Administrator Bruce McCandless said Monday. A mayor's task force on energy and conservation issues also is discussing biodiesel use.

This fall when the city solicited annual bids for its fuel supply, biodiesel was an alternative. According to city records, the two firms that made biodiesel bids offered better prices on regular diesel. City staff recommended going with the lowest price and that's what the City Council did.

The city of Billings uses 500,000 gallons of diesel a year, so even a few cents difference in the per gallon price makes a big difference in the city's annual cost. But there is also value in reducing air pollution and increasing use of alternatives to traditional petroleum products.

Biodiesel is likely to become more cost-effective and more available. The city of Billings should actively monitor this alternative fuel to take advantage of a cleaner product that also supports new opportunities for Montana agriculture producers.